

REMARKS

Applicants appreciate the Examiner's consideration provided the present application. The specification has been amended. Claims 48-80 are now present in the application. Claims 48, 77 and 79 are independent. Reconsideration of this application is respectfully requested.

Specification Objections

The specification has been objected to due to the presence of minor informalities. In view of the foregoing amendments, it is respectfully submitted that this objection has been addressed. Accordingly, Applicants respectfully submit that this objection has been obviated and/or rendered moot. Reconsideration and withdrawal of this objection are respectfully requested. Applicants also respectfully submit that no new matter is entered. Entry of the above amendments to the specification is earnestly solicited.

Claim Rejections Under 35 U.S.C. §§ 102 & 103

Claims 48-55, 59, 60, 62-64, 70, 74 and 77-79 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Bailey, U.S. Patent No. 6,028,315. Claims 56-58, 65, 67, 72 and 80 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bailey in view of Spero, U.S. Patent No. 3,911,318. Claim 61 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bailey in view of Son, U.S. Patent No. 4,073,770. Claims 68, 71 and 75 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bailey in view of Wang, U.S. Patent No. 6,135,838. Claim 69 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bailey in view of Spero, and further in view

of Ressler, U.S. Patent No. 5,626,768. Claim 73 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bailey in view of Macklin, U.S. Patent No. 4,504,955. Claim 76 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bailey in view of Shie, U.S. Patent No. 6,166,389. These rejections are respectfully traversed.

Independent claim 48 recites a combination of elements including “a waveguide for guiding microwave energy originating from said microwave energy source to the ultraviolet lamp, said waveguide being UV transparent and wholly surrounding the ultraviolet lamp”.

Independent claim 77 recites a combination of elements including “a waveguide for guiding microwave energy originating from a microwave energy source to the ultraviolet lamp, said waveguide being UV transparent and wholly surrounding the ultraviolet lamp”.

Independent claim 79 recites a combination of steps including “guiding microwave energy from a microwave energy source to an ultraviolet lamp to produce ultraviolet radiation” and “wholly surrounding the ultraviolet lamp with a UV transparent waveguide”.

Applicants respectfully submit that the above combinations of elements and steps as set forth in independent claims 48, 77 and 79 are not disclosed nor suggested by the references relied on by the Examiner.

The Examiner referred to Bailey's sealed unit 111 as the waveguide for guiding microwave energy originating from a microwave energy source to the ultraviolet lamp as recited in claims 48, 77 and 79. Applicants respectfully disagree. In particular, Bailey discloses that the microwaves generated by the magnetron 104 are directed through a

plastic window into the chamber 107 or 117 (see FIGs. 5 and 6, col. 5, lines 47-49). The microwaves then pass through the wall of the hollow column 110 into the sealed unit 111, thereby exciting the gas and causing the sealed unit 111 to emit the UV light (see col. 6, lines 59-64). In other words, Bailey's sealed unit 111 is an ultraviolet lamp, not a UV transparent waveguide.

In addition, Bailey also fails to teach any UV transparent waveguide guiding microwave energy from the magnetron 104 to the ultraviolet lamp 111 as recited in claims 48, 77 and 79. Bailey merely discloses that the hollow column 110 forms a shield to protect the bulb (see col. 5, lines 58-59) and that the air passage 112 assists in air cooling thereof (see col. 5, lines 60-66). Bailey nowhere teaches that the hollow column 110 or the air passage 112 provides for the function of guiding microwave energy from the magnetron 104 to the ultraviolet lamp 111. In fact, since the hollow column 110 and the air passage 112 are away from the magnetron 104, they cannot guide microwave energy from the magnetron 104 to the ultraviolet lamp 111.

To further clarify the present invention, Applicants respectfully submit that Bailey discloses a chamber sterilization apparatus, in which microwaves are simply released into a chamber 107 with reflective walls, and within which there is an ultraviolet lamp 111 within a cooling column 110, 112. Unlike Bailey, the claimed invention uses a UV transparent waveguide to specifically guide the microwave energy originating from a microwave energy source to an ultraviolet lamp.

With regard to the Examiner's reliance on Spero, Son, Wang, Ressler, Macklin and Shie, these references have only been relied on for their teachings related to the subject matter of dependent claims. These references also fail to disclose the above

combinations of elements and steps as set forth in independent claims 48, 77 and 79. Accordingly, these references fail to cure the deficiencies of Bailey.

Accordingly, none of the references utilized by the Examiner individually or in combination teach or suggest the limitations of independent claims 48, 77 and 79 or their dependent claims. Therefore, Applicants respectfully submit that independent claims 48, 77 and 79 and their dependent claims clearly define over the teachings of the references relied on by the Examiner.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §§102 and 103 are respectfully requested.

CONCLUSION

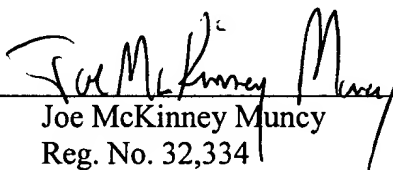
It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Joe McKinney Muncy, Registration No. 32,334 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 
Joe McKinney Muncy
Reg. No. 32,334

KM/GH/mmi/asc
3552-0107P



P. O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000